CLAIMS

1. An apparatus comprising:

at least one processor; and

one or more media including processor-executable instructions that are capable of being executed by the at least one processor, the processor-executable instructions adapted to direct the apparatus to perform actions comprising:

monitoring at least one signal characteristic for a plurality of signals that relate to a single source address; and

detecting a wireless interloper if a discrepancy is determined to exist with regard to the monitored at least one signal characteristic for the plurality of signals.

2. The apparatus as recited in claim 1, wherein the processor-executable instructions are adapted to cause the apparatus to perform further actions comprising:

producing a plurality of communication beams; and

receiving the plurality of signals via at least one communication beam of the plurality of communication beams.

3. The apparatus as recited in claim 1, wherein the apparatus comprises an access station or a remote client.

4. The apparatus as recited in claim 3, wherein the apparatus further comprises:

an antenna array having a plurality of antenna elements; and

a beamformer coupled to the antenna array.

5. The apparatus as recited in claim 1, wherein the monitoring action comprises:

ascertaining the at least one signal characteristic for the plurality of signals.

6. The apparatus as recited in claim 5, wherein the ascertaining action comprises:

ascertaining the at least one signal characteristic as selected from the group comprising: arrival delay, arrival direction, multipath offset, signal frequency, and signal strength.

7. The apparatus as recited in claim 1, wherein the processor-executable instructions are adapted to cause the apparatus to perform a further action comprising:

determining if the discrepancy exists with regard to the monitored at least one signal characteristic for the plurality of signals.

8. The apparatus as recited in claim 7, wherein the determining action comprises:

determining if the monitored at least one signal characteristic for a first signal of the plurality of signals fails to be commensurate with the monitored at least one signal characteristic for a second signal of the plurality of signals.

9. The apparatus as recited in claim 7, wherein the determining action comprises:

determining if a bi-modal distribution exists responsive to a predetermined threshold with regard to the monitored at least one signal characteristic for the plurality of signals.

10. The apparatus as recited in claim 1, wherein the processor-executable instructions are adapted to cause the apparatus to perform a further action comprising:

if a wireless interloper is detected in the detecting action, countering the wireless interloper.

11. The apparatus as recited in claim 1, wherein the monitoring action comprises:

receiving a plurality of packets having the at least one signal characteristic, each packet of the plurality of packets including the single source address.

12. The apparatus as recited in claim 1, wherein the detecting action comprises:

detecting that two sources exist for the plurality of signals that related to the single source address if a discrepancy is determined to exist with regard to the monitored at least one signal characteristic for the plurality of signals.

13. One or more processor-accessible media comprising processor-executable instructions that, when executed, direct an apparatus to perform actions comprising:

ascertaining at least one signal characteristic for a plurality of signals that relate to a single source address; and

detecting a wireless interloper if a discrepancy is determined to exist with regard to the ascertained at least one signal characteristic for the plurality of signals that relate to the single source address.

14. The one or more processor-accessible media as recited in claim 13, comprising the processor-executable instructions that, when executed, direct the apparatus to perform a further action comprising:

countering a detected wireless interloper.

15. The one or more processor-accessible media as recited in claim 14, wherein the action of countering comprises at least one action selected from the group comprising:

providing notification of the detected wireless interloper;

recording the ascertained at least one signal characteristic for the plurality of signals that relate to the single source address; and

terminating one or more communications that relate to the single source address.

16. The one or more processor-accessible media as recited in claim 13, wherein at least a portion of the processor-executable instructions comprise at least part of software for a wireless access station.

17. An access station that is capable of ascertaining at least one signal characteristic for a plurality of signals, that is configured to detect a wireless interloper with regard to a particular address by analyzing the ascertained at least one signal characteristic for the plurality of signals, and that is adapted to counter the detected wireless interloper.

18. The access station as recited in claim 17, wherein the access station is further configured to detect a wireless interloper by analyzing the ascertained at least one signal characteristic for particular signals of the plurality of signals that are associated with the particular address.

19. The access station as recited in claim 17, wherein the access station is further configured to detect a wireless interloper by determining that a discrepancy exists with respect to the ascertained at least one signal characteristic for particular signals of the plurality of signals, wherein the particular signals are associated with the particular address.

20. A wireless receiver that is configured to perform actions comprising:

receiving a first packet that includes a particular address and has at least one first characteristic;

receiving a second packet that includes the particular address and has at least one second characteristic;

determining if the at least one first characteristic fails to be commensurate with the at least one second characteristic; and

if so, detecting an interloper with respect to packets with the particular address.

21. The wireless receiver as recited in claim 20, wherein the wireless receiver comprises at least one of an access station and a remote client.

22. The wireless receiver as recited in claim 20, wherein the wireless receiver is configured to perform a further action comprising:

if not, continuing to monitor received packets that include the particular address.

23. The wireless receiver as recited in claim 20, wherein the at least one first characteristic and the at least one second characteristic comprise one or more spatial parameters.

24. The wireless receiver as recited in claim 23, wherein the one or more spatial parameters comprise at least one of an arrival delay, an arrival direction, and a multipath offset.

25. The wireless receiver as recited in claim 20, wherein the at least one first characteristic and the at least one second characteristic comprise one or more signal characteristics selected from the group comprising: arrival delay, arrival direction, multipath offset, signal frequency, and signal strength.

26. An apparatus comprising:

at least one processor; and

one or more media including processor-executable instructions that are capable of being executed by the at least one processor, the processor-executable instructions adapted to direct the apparatus to perform actions comprising:

ascertaining at least one characteristic for a packet having a particular address;

logging the at least one characteristic for the packet in association with the particular address;

determining if a bi-modal distribution exists with regard to the particular address; and

if a bi-modal distribution is determined to exist, detecting an interloper with regard to the particular address.

27. The apparatus as recited in claim 26, wherein the processor-executable instructions are adapted to cause the apparatus to perform a further action comprising:

receiving the packet having the particular address via a communication beam of a plurality of communication beams.

28. The apparatus as recited in claim 26, wherein the apparatus comprises at least one of an access station and a remote client.

29. The apparatus as recited in claim 26, wherein the ascertaining action comprises:

ascertaining at least one signal characteristic for the packet having the particular address.

30. The apparatus as recited in claim 26, wherein the ascertaining action comprises:

ascertaining at least one of arrival direction and multipath offset for the packet having the particular address.

31. The apparatus as recited in claim 26, wherein the ascertaining action comprises:

ascertaining the at least one characteristic as selected from the group comprising: arrival delay, arrival direction, multipath offset, signal frequency, and signal strength.

32. The apparatus as recited in claim 26, wherein the ascertaining action comprises:

ascertaining a value for the at least one characteristic for the packet having the particular address.

33. The apparatus as recited in claim 26, wherein the logging action comprises:

storing the at least one characteristic for the packet at an entry in a table, the entry corresponding to the particular address.

34. The apparatus as recited in claim 26, wherein the logging action comprises:

increasing a packet tally at an ascertained value of the at least one characteristic at an entry corresponding to the particular address.

35. The apparatus as recited in claim 26, wherein:

the one or more media further includes a table linking assigned addresses to signal characteristics; and

the logging action comprises storing the at least one characteristic for the packet at an entry that corresponds to the particular address in the table.

36. The apparatus as recited in claim 26, wherein the determining action comprises:

determining if a bi-modal distribution exists with regard to the particular address for any signal characteristic.

37. The apparatus as recited in claim 26, wherein the determining action comprises:

determining if a bi-modal distribution exists with regard to the particular address responsive to at least one threshold.

38. The apparatus as recited in claim 37, wherein the at least one threshold comprises a number of packets.

39. The apparatus as recited in claim 37, wherein the determining action further comprises:

determining if two packet tallies for two different values exceed the at least one threshold for the at least one characteristic with regard to the particular address.

40. The apparatus as recited in claim 26, wherein the detecting action comprises:

clearing the bi-modal distribution that exists with regard to the particular address;

determining if the bi-modal distribution is presented again; and

if so, detecting the interloper with regard to the particular address based on the re-presentation of the bi-modal distribution.

41. The apparatus as recited in claim 26, wherein the processor-executable instructions are adapted to cause the apparatus to perform further actions comprising:

determining if another bi-modal distribution exists with regard to the particular address; and

if both the bi-modal distribution and the other bi-modal distribution are determined to exist, detecting the interloper with regard to the particular address.

42. The apparatus as recited in claim 26, wherein the processor-executable instructions are adapted to cause the apparatus to perform a further action comprising:

applying an aging policy to logged characteristics for packets having the particular address.

43. The apparatus as recited in claim 42, wherein the applying action comprises:

applying an aging policy to logged characteristics for packets having the particular address in dependence on a current number of logged packets.

44. The apparatus as recited in claim 42, wherein the applying action comprises:

applying an aging policy to logged characteristics for packets having the particular address by employing a decaying time constant.

45. The apparatus as recited in claim 26, wherein the processor-executable instructions are adapted to cause the apparatus to perform a further action comprising:

countering the detected interloper.

46. The apparatus as recited in claim 45, wherein the countering action comprises:

providing a notification of the detected interloper.

47. The apparatus as recited in claim 45, wherein the countering action comprises:

recording logged characteristics that are associated with the particular address.

48. The apparatus as recited in claim 45, wherein the countering action comprises:

recording a payload of the packet having the particular address.

49. The apparatus as recited in claim 45, wherein the countering action comprises:

terminating one or more communications involving packets having the particular address.

50. A wireless apparatus that is configured to perform actions comprising:

receiving a packet having a particular address;

increasing a tally for a value for at least one characteristic of the received packet, the tally associated with the particular address;

determining if tallies for two different values exceed a predetermined threshold, the tallies associated with the particular address; and

if tallies for two different values are determined to exceed the predetermined threshold, detecting a wireless interloper with regard to the particular address.

51. The wireless apparatus as recited in claim 50, wherein the wireless apparatus is configured to perform a further action comprising:

ascertaining the value for the at least one characteristic of the received packet.

52. The wireless apparatus as recited in claim 50, wherein the apparatus comprises at least one of an access station and a remote client.

53. The wireless apparatus as recited in claim 50, wherein the at least one characteristic comprises at least one signal characteristic selected from the group comprising: arrival delay, arrival direction, multipath offset, signal frequency, and signal strength.

54. The wireless apparatus as recited in claim 50, further comprising:

a table having a plurality of entries, each entry of the plurality of entries associating an address with one or more characteristics; a particular entry of the plurality of entries corresponding to the particular address, wherein the tally for the value for the at least one characteristic of the received packet is stored at the particular entry.

55. The wireless apparatus as recited in claim 50, wherein the determining action comprises:

determining if a bi-modal distribution exists with regard to the particular address for the at least one characteristic.

56. The wireless apparatus as recited in claim 50, wherein the predetermined threshold comprises a number of packets.

57. The wireless apparatus as recited in claim 50, wherein the tally represents a plurality of received packets including an oldest received packet of the plurality of received packets; and wherein the wireless apparatus is configured to perform a further action comprising:

decreasing the tally if an age of the oldest received packet exceeds a predetermined period.

58. The wireless apparatus as recited in claim 50, wherein the wireless apparatus is configured to perform a further action comprising:

countering the detected wireless interloper.

59. The wireless apparatus as recited in claim 58, wherein the countering action comprises at least one of:

providing a notification of the detected wireless interloper;

recording the two different values for the at least one characteristic that are associated with the particular address; and

terminating one or more communications that involve received packets having the particular address.

60. An arrangement comprising:

means for monitoring at least one signal characteristic for a plurality of signals that relate to a single source address; and

means for detecting a wireless interloper if a discrepancy is determined to exist with regard to the monitored at least one signal characteristic for the plurality of signals.

61. The arrangement as recited in claim 60, further comprising:

means for producing a plurality of communication beams; and

means for receiving the plurality of signals via at least one communication beam of the plurality of communication beams.

62. The arrangement as recited in claim 60, wherein the means for monitoring comprises:

means for ascertaining the at least one signal characteristic for the plurality of signals.

63. The arrangement as recited in claim 60, further comprising:

means for determining if the discrepancy exists with regard to the monitored at least one signal characteristic for the plurality of signals.

64. The arrangement as recited in claim 63, wherein the means for determining comprises:

means for determining if the monitored at least one signal characteristic for a first signal of the plurality of signals fails to be commensurate with the monitored at least one signal characteristic for a second signal of the plurality of signals.

65. The arrangement as recited in claim 63, wherein the means for determining comprises:

means for determining if a bi-modal distribution exists responsive to a predetermined threshold with regard to the monitored at least one signal characteristic for the plurality of signals.

66. The arrangement as recited in claim 60, further comprising:

means for countering a wireless interloper responsive to the means for detecting.

67. The arrangement as recited in claim 60, wherein the means for monitoring comprises:

means for receiving a plurality of packets having the at least one signal characteristic, each packet of the plurality of packets including the single source address.

68. The arrangement as recited in claim 60, wherein the means for detecting comprises:

means for detecting that two sources exist for the plurality of signals that relate to the single source address if a discrepancy is determined to exist with regard to the monitored at least one signal characteristic for the plurality of signals.

69. A method comprising:

ascertaining a plurality of respective values for at least one signal characteristic for a plurality of respective packets, each packet of the plurality of respective packets corresponding to a particular source address; and

determining if the plurality of respective packets originate from more than one source responsive to the plurality of respective values.

70. The method as recited in claim 69, further comprising:

if the plurality of respective packets are determined to originate from more than one source,

detecting that a wireless interloper is present with regard to the particular source address; and

countering the detected wireless interloper.

71. The method as recited in claim 69, wherein the determining comprises:

determining that a discrepancy exists among the plurality of respective values for the at least one signal characteristic for the plurality of respective packets.

72. The method as recited in claim 69, wherein the determining comprises:

determining that a first set of values from the plurality of respective values fails to be commensurate with a second set of values from the plurality of respective values.

73. The method as recited in claim 69, wherein the determining comprises:

determining that a first packet tally corresponding to a first bin holding at least a portion of the plurality of respective values and a second packet tally corresponding to a second bin holding at least a portion of the plurality of respective values both equal or exceed a predetermined threshold for the at least one signal characteristic.

74. One or more processor-accessible media comprising processor-executable instructions that, when executed, direct an apparatus to perform the method as recited in claim 69.

75. An apparatus comprising:

a signal characteristic ascertainer that is capable of ascertaining values for at least one signal characteristic for received packets having a particular source address; and

a discrepancy detector that is adapted to detect a discrepancy among the ascertained values for the at least one signal characteristic for the received packets having the particular source address so as to detect a wireless interloper with regard to the particular source address.

76. The apparatus as recited in claim 75, further comprising:

a table having a plurality of entries, each entry of the plurality of entries corresponding to a source address and associating values for the at least one signal characteristic therewith; the associated values ascertained from received packets having the corresponding source address.

77. The apparatus as recited in claim 76, wherein the table includes a particular entry that corresponds to the particular source address, the particular entry associating the ascertained values for the at least one signal characteristic for the received packets with the corresponding particular source address.

78. The apparatus as recited in claim 75, further comprising:

an antenna array;

a beamformer coupled to the antenna array; and

one or more radio frequency signal processors coupled to the beamformer;

wherein the received packets are provided to the signal characteristic ascertainer via the antenna array, the beamformer, and the one or more radio frequency signal processors.

79. The apparatus as recited in claim 75, wherein the discrepancy detector is configured to implement at least one countermeasure against the detected wireless interloper.

80. The apparatus as recited in claim 79, wherein the at least one countermeasure comprises at least one of notification, recordation, and communication termination.